

## **ABSTRACT**

The present invention is directed to system and method for current sensing using an anti-differential, error correcting, current sensing system. The invention includes a conductive path configured to receive a current therethrough. A first current sensor is positioned on a first side of the conductive path and configured to monitor a first directional magnetic field induced by the current. A second current sensor is positioned on a second side of the conductive path, substantially opposite the first current sensor, and configured to monitor a second directional magnetic field induced by the current that is substantially opposite in direction to the first directional magnetic field. A processing component is configured to receive feedback from the first current sensor and the second current sensor and generate an anti-differential output from the feedback.